

Application No. 09/977,984
Reply to Office Action of January 25, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method of attempting to establish a connection path between first and second nodes ~~in a communications network~~ over at least one intermediary node in an MPLS routing domain established within an IP over ATM network, said method comprising attempting to establish said connection after a period of time has elapsed which is based on a previous interval of delay between two previous attempts, wherein said period of time is greater than said previous interval of delay by a predetermined time value.

Claim 2. (Cancelled) ~~The method as claimed in claim 1, wherein said period of time is greater than said another period of time by a fixed time value.~~

Claim 3. (Original) The method as claimed in claim 1, wherein said period of time does not exceed a maximum time value.

Claim 4. (Original) The method as claimed in claim 1 wherein said connection path is a soft permanent label switched path.

Claim 5. (Currently Amended) The method as claimed in claim ~~[[2]]~~ 1 wherein said fixed time value is ten seconds.

Claim 6. (Currently Amended) A method of timing attempts to establish ~~connections for a plurality of requests for connections in a communication network~~ a connection over at least one intermediary node in an MPLS routing domain established within an IP over ATM network, said method comprising:

having a timer arrangement tracking passage of a regular interval of time;

having a list of records relating said to a plurality of requests for connections;

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selecting one record from said list;
attempting to establish a connection relating to said one record; and if said connection
relating to said one record is established, then
marking said one record as being successful, otherwise, re-attempting to establish
said connection at successive intervals increasing by said a regular
interval.

Claim 7. (Currently Amended) The method as claimed in claim 6 wherein said selecting
one record from said list comprises:

having a time field in said list of records;
on each said regular interval of time for each entry in said list of records:
decrementing a time value in said time field; and
if said time value ~~is zero~~ for an entry is zero, then selecting said entry as said one
record.

Claim 8. (Previously Amended) The method as claimed in claim 6, wherein when re-
attempting to establish said connection at successive time intervals, said successive time
intervals do not exceed a maximum time value.

Claim 9. (Original) The method as claimed in claim 8 wherein said maximum time value is
sixty seconds.

Claim 10. (Cancelled)

Claim 11. (Cancelled)

Claim 12. (Currently Amended) A method of establishing a label switched path (LSP) over
an MPLS routing domain established within an IP over ATM network, comprising the steps of:

(a) receiving a LSP setup request for connecting an ingress node in said MPLS routing
domain with an egress node;

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- (b) defining a unique LSP ID for said LSP and establishing a signaling link between said ingress and egress node, by creating a label distribution protocol (LDP) session at said ingress node, egress node and each hop along said LSP;
- (c) associating all said LDP sessions to said LSP; and
- (d) establishing said LSP for transmitting traffic along said LSP between said ingress and egress node by providing at said ingress node a retry timer based on a back off mechanism for enabling successive attempts to establish said LSP at increasing retry intervals.

Claim 13. (Previously Presented) The method of claim 12, wherein said retry timer provides an initial retry interval of T seconds, and each next successive retry interval is longer than a previous period of time by T seconds.

Claim 14. (Previously Presented) The method as claimed in claim 13 wherein the sum of the increasing retry intervals does not exceed a maximum time value.

Claim 15. (Previously Presented) The method as claimed in claim 13 wherein said LSP is a signaling LSP.

Claim 16. (Previously Presented) The method as claimed in claim 13 wherein T is 10 seconds.

Claim 17. (Currently Amended) The method of claim 12, wherein said retry timer tracks an interval of time, and said step (d) further comprises:

- selecting one record from a list of records relating to a plurality of requests for connections;
- attempting to establish a connection relating to said one record, said connection being associated with said LSP; and
- if said connection relating to said one record is established, then marking said one record as being successfully connected, otherwise, re-attempting to establish said

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connection at said increasing retry intervals, each of said successive increasing retry interval being greater than a last retry interval by said regular interval of time.

Claim 18. (Previously Presented) The method as claimed in claim 17, wherein:
each record of said list of records includes a respective time field; and
said selecting one record from said list comprises, at each said increasing retry interval and for said each record in said list of records:
decrementing a time value stored in said each respective time field; and
if the time value for any said each respective time field is zero, then selecting the record associated with the any said each respective time field as said one record.

Claim 19. (Previously Presented) The method as claimed in claim 17, wherein said re-attempting to establish said connection occurs only if the sum of the increasing retry intervals does not exceed a maximum time value.

Claim 20 (Previously Presented) The method as claimed in claim 19 wherein said maximum time value is sixty seconds.

Claim 21 (Previously Presented) The method of claim 12, wherein said step (b) comprises: establishing at least another signaling link between said ingress and egress node, and selecting one of said signaling link and said another signaling link utilizing a round robin algorithm.

Claim 22. (Previously Presented) The method of claim 21, further comprising not selecting any of said signaling links whenever said network does not have sufficient resources for establishing one of said signaling links.